



GUIDELINES AND RESOURCES

Updated Interim Infection Control and Exposure Management Guidance in the Health-Care and Community Setting for Patients with Possible Monkeypox Virus Infection

The Centers for Disease Control and Prevention (CDC) and state and local health departments continue to investigate cases of monkeypox among persons who had close contact with wild or exotic mammalian pets or persons with monkeypox. Results of serologic testing, polymerase-chain-reaction analysis, viral culture and gene sequencing performed at the CDC indicate that the causative agent is monkeypox virus, a member of the orthopoxvirus group of viruses. CDC is updating previous interim guidance concerning infection control precautions and exposure management in the health-care and community settings. The guidance will be further updated as additional information about the epidemiology of disease transmission is better understood.

Limited data on transmission of monkeypox virus are available from studies conducted in Africa. Person-to-person transmission is believed to occur primarily through direct contact and also by respiratory droplet spread. Transmission of monkeypox within hospitals has been described, albeit rarely. Extrapolating from smallpox for which airborne transmission has been clearly described, airborne transmission of monkeypox virus cannot be excluded, especially in patients presenting with cough.

Infection Control: General Precautions

Persons seeking medical care with fever or rash should be asked about possible exposure to wild or exotic mammalian pets (e.g., pet prairie dogs and Gambian giant rats) or persons with monkeypox. If a patient with suspect monkeypox infection is seen as an outpatient or admitted to the hospital, infection control personnel should be notified immediately. A combination of Standard, Contact, and Airborne Precautions (www.cdc.gov/ncidod/hip/isolat/isolat.htm) should be applied in all health-care settings.

These include:

1. Hand hygiene after all contact with an infected patient and/or the environment of care.
2. Use of gown and gloves for any contact with the patient and/or the environment of care.
3. Eye protection (e.g. tight-fitting goggles or face shield) if splash or spray of body fluids is likely.
4. Respiratory protection including a NIOSH-certified N95 filtering disposable respirator (or other respirator offering comparable levels of respiratory protection) for entering the room or patient care area.¹ If N95 or comparable respirators are not available for health-care personnel, then surgical masks should be worn to protect against transmission through contact or large droplets.
5. Airborne isolation room with negative pressure relative to the surrounding area. If a negative pressure room is not available, place the patient in a private room.
6. Contain and dispose of contaminated waste (e.g., dressings) in accordance with facility-specific guidelines for infectious waste or local regulations pertaining to household waste.
7. Use care when handling soiled laundry (e.g., bedding, towels, personal clothing) to avoid contact with lesion exudates. Soiled laundry should not be shaken or otherwise handled in a manner that may aerosolize infectious particles.
8. Handle used patient-care equipment in a manner that prevents contamination of skin and clothing. Ensure that used equipment has been cleaned and reprocessed appropriately.

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9. Ensure that procedures are in place for cleaning and disinfecting environmental surfaces in the patient care environment. Any EPA-registered hospital detergent-disinfectant currently used by health-care facilities for environmental sanitation may be used. Manufacturer's recommendations for use-dilution (i.e., concentration), contact time and care in handling should be followed.

Vaccination of Healthcare Workers and Household Contacts of Suspected Cases of Monkeypox

Vaccination with smallpox vaccine is recommended for health care workers who care for patients with monkeypox as well as household contacts (www.cdc.gov/ncidod/monkeypox/vaccination.htm). Health care workers and household contacts who care for suspected cases of monkeypox should continue to observe recommended precautions even if vaccinated.

Infection Control: Outpatient Management

Segregate the patient from others in the reception area as soon as possible, preferably in a private room with negative pressure relative to the surrounding area. Place a surgical mask over the patient's nose and mouth. Care should be taken to cover exposed skin lesions (sheet and/or gown on patient) to prevent contact with infectious material.

Monitoring of Exposed Health-care Personnel

Health-care workers who have unprotected exposures to patients with monkeypox need not be excluded from duty, but should undergo active surveillance for symptoms, including measurement of body temperature at least twice daily for 21 days following the exposure. Prior to reporting for duty each day, the health-care worker should be interviewed regarding symptoms and have their temperature measured by employee health or other designee.

Health-care workers who have cared for or otherwise been exposed to monkeypox patients while adhering to recommended infection control precautions should be instructed to be vigilant for fever and other symptoms, including measurement of body temperature at least twice daily for 21 days following the last exposure to a monkeypox patient. These health-care workers should be contacted by occupational health, infection control or their designee regularly over the 21-day period following exposure to inquire about fever or other symptoms.

Home Management

1. Home isolation
 - a. Patients who do not require hospitalization for medical indications may be isolated at home. Persons with extensive lesions that cannot be easily covered (excluding facial lesions) or draining/weeping lesions or respiratory symptoms (e.g., cough, sore throat, or rhinorrhea) should be isolated in a room or area separate from other family members when possible. For movement outside the isolation area, a surgical mask should be worn if respiratory symptoms are present.
 - b. Skin lesions should be covered to the extent possible (e.g., long sleeves, long pants) to minimize risk of contact with others.
 - c. Family members who enter the room or area should wear a surgical mask that fits snugly; disposable gloves should be worn for direct contact with the patient.
 - d. Unexposed persons should not enter the home. Health-care personnel and others who must enter the home to provide patient-related services should wear an N95 respirator.
2. Hand hygiene (i.e., hand washing with soap and water or use of an alcohol-based hand rub) should be performed by infected persons and household contacts frequently, and particularly after touching body sites, clothing, linens, or environmental surfaces that may have had contact with infectious lesions.

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3. Laundry (e.g., bedding, towels, clothing) may be washed in a standard washing machine with warm water and detergent; bleach may be added but is not necessary. Care should be used when handling soiled laundry to avoid direct contact with contaminated material. Soiled laundry should not be shaken or otherwise handled in a manner that may aerosolize infectious particles.
4. Dishes and other eating utensils should not be shared but segregations of specific utensils for use by the infected person is not necessary. Soiled dishes and eating utensils should be washed with warm water and soap.
5. Contaminated surfaces should be cleaned and disinfected. Standard household cleaning/disinfectants may be used in accordance with manufacturer's instructions.
6. Dressing, bandages, and other materials contaminated with lesion drainage should be bagged and placed in another container for disposal with other household waste.

Duration of Isolation Precautions

Decisions regarding discontinuation of isolation precautions, either in health-care facilities or home settings, should be made only after consultation with the local or state health department.

For individuals with vesiculopustular rash, isolation precautions, either in health-care facilities or home settings, should be continued until all lesions are crusted. Following the discontinuation of isolation precautions, affected individuals should avoid close contact with immunocompromised persons until all crusts have separated. Immunocompromised persons include those whose immune mechanisms are deficient because of immunologic disorders (e.g., human immunodeficiency virus [HIV] infection or congenital immune deficiency syndrome); chronic diseases (e.g., diabetes, cancer, emphysema, or cardiac failure); or immunosuppressive therapy (e.g., radiation, cytotoxic chemotherapy, anti-rejection medication, or steroids).

For individuals who develop symptoms (i.e., fever, sore throat, cough) without rash, isolation precautions should be continued for 7 days after fever onset. If rash does not develop during this time, isolation precautions may be discontinued. Affected individuals should continue symptom surveillance for an additional 14 days. If symptoms return or if rash develops the local or state health department should be notified immediately.

Asymptomatic Contacts

Asymptomatic contacts to animals or humans suspected to have monkeypox should be placed under symptom surveillance for 21 days after their last exposure. Symptoms of concern include fever (temperature $\geq 99.3^{\circ}\text{F}$), sore throat, cough, or skin rash.

Asymptomatic contacts should continue routine daily activities (e.g., go to work, school) but should remain close to home for the duration of surveillance. However, it may be prudent to exclude pre-school children from daycare or other group settings.

Contacts should monitor their temperature twice daily. In addition, they should maintain daily telephone contact with designated health department personnel. If resources permit, closer monitoring is desirable.

1 Respirators should be used in the context of a complete respiratory protection program in accordance with OSHA regulations. This includes training and fit testing to ensure a proper seal between the respirator's sealing surface and the wearer's face. Detailed information on respirator programs, including fit test procedures can be accessed at www.osha.gov/sltc/etools/respiratory. Where possible, a qualitative fit test should be conducted for N95 respirators; detailed information on fit testing can be accessed at www.osha.gov/sltc/etools/respiratory/oshafiles/fittesting1.html.

For more information, visit www.cdc.gov/ncidod/monkeypox or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)

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